

KEEP INVASIVE MOLLUSKS OUT OF LAKE TAHOE: CLEAN, DRAIN, AND DRY YOUR BOAT...

Invasive Aquatic Mollusks:



Asian Clam (*Corbicula fluminea*)

Size: 1 to 1 1/2 inches (25 to 40 mm)

Food: These clams filter particles suspended in water, including bacteria, algae, and detritus.

Preferred Habitat: silt, sand, and gravel in near-shore areas from approximately 10 to 30 feet (4 to 10 m)

Primary Means of Introduction: intentional release of aquarium clams, angler bait dumping, microscopic larvae transferred via un-drained boats

Already present in South Lake Tahoe

Photo Credit: U.S. Geological Survey, Florida Integrated Science Center

Zebra Mussels (*Dreissena polymorpha*) and Quagga Mussels (*Dreissena bugensis*)

Size: 1/4 to 1 1/2 inches (5 to 40 mm)

Food: These mussels filter particles suspended in water, including bacteria, algae, and detritus.

Preferred Habitat: hard substrate from 10 to 200 feet (4 to 60 m)

Primary Means of Introduction: Adults attach to watercraft and fishing gear, and microscopic larvae are transferred in water of un-drained boats.

Currently **not present in Lake Tahoe**; however, quagga mussels were recently discovered in Lake Mead and a study this year showed the quagga can survive in Lake Tahoe waters. Please **clean, drain, and dry** your fishing gear and watercraft.

Both mussels have devastating impacts on aquatic ecosystems.

New Zealand Mudsnailed (*Potamopyrgus antipodarum*)

Size: Small! 1/10 to 1/5 inch (2 to 6 mm)

Food: periphyton (algae)

Preferred Habitat: silt, sand, cobble, and aquatic vegetation at depths from 13 to 130 feet (4 to 40 m)

Primary Means of Introduction: attached to watercraft and fishing gear, larvae in water of un-drained watercraft

Currently **not present in Lake Tahoe**, but have invaded many areas of the West. Please help to keep these invaders out of Lake Tahoe! More information on how to prevent the spread of New Zealand Mudsnailed is available from the California Department of Fish and Game:

<http://www.dfg.ca.gov/invasives/mudsnail/>

Photo Credit: R. Draheim, Portland State University Center for Lakes and Reservoirs

Invasive species cause serious ecological damage to aquatic ecosystems and can have serious economic consequences. Report an invasive species, call the Aquatic Nuisance Species hotline 1-888-TAHO-ANS”

For more information about invasive species at Lake Tahoe contact Sudeep Chandra, limnologist, professor and researcher at the University of Nevada, Reno's Department of Natural Resources and Environmental Science. Office: (775) 784-6221, Email: sudeep@cabnr.unr.edu, Personal Web: <http://www.cabnr.unr.edu/chandra/>



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...BUT DON'T CONFUSE INVASIVES WITH NATIVE CLAMS, MUSSELS, AND SNAILS.

Lake Tahoe's Native Mollusks:



Fingernail/Pea Clam (*Pisidium*)

Size: Small! 1/25 to 1/5 inch (1 to 5 mm)

Food: These clams filter bacteria, algae, and detritus suspended in water.

Preferred Habitat: silt, sand, and clay at a wide range of depths, ranging from 6 to 600 feet (2 to 180 m)



Dextral Pond Snail (*Lymnaea* or *Fossaria*)

Size: 1/10 to 1/2 inch (3 to 13 mm)

Food: periphyton (algae)

Preferred Habitat: cobble or aquatic vegetation, from 6 to 130 feet (2 to 40 m)

*Note that the snail is right-handed (dextral). When you hold the snail with the opening (aperture) facing you, the opening is on the right-hand side.

Photo credit: National Oceanic and Atmospheric Administration (NOAA)/Great Lakes Environmental Research Laboratory (GLERL)



Sinistral Pond Snail (*Physella*)

Size: 1/5 to 1/2 inch (5 to 13 mm)

Food: detritus and associated bacteria at the bottom of the lake

Preferred Habitat: cobble or aquatic vegetation in shallow water

*Note that the snail is left-handed (sinistral). When you hold the snail with the opening (aperture) facing you, the opening is on the left-hand side.

Photo Credit: Freshwater Gastropods of North America (FGNA) Project



Ramshorn Snail (*Planorbidae*)

Size: Approximately 1/5 to 1/2 inch (5 to 15 mm)

Food: detritus and associated bacteria at the bottom of the lake

Preferred Habitat: silt, cobble, or aquatic vegetation in shallow to deep water, 6 to 400 feet (2 to 120 m)

Photo credit: International Wildlife Museum



Freshwater Limpet (*Ferrisia fragilis*)

Size: 1/25 to 1/5 inch (1 to 4 mm)

Food: periphyton (algae)

Preferred Habitat: cobble or aquatic vegetation in relatively shallow water

Photo credit: Martin Kohl



Western Pearlshell Mussel (*Margaritifera falcata*)

Size: 2 to 3 1/2 inches (50 to 85 mm)

Food: Larvae are parasitic on fish. Adults filter algae, bacteria, and detritus suspended in water.

Preferred Habitat: sand, gravel, cobble, and boulder habitat in streams and rivers (ex. Upper Truckee River)

Photo credit: D.L. Gustafson